

Claims:

1. A U-type superconductive microstrip resonator, characterized in that:

said superconductive microstrip resonator has a U-type structure formed by folding a superconductive microstrip line.

2. The U-type superconductive microstrip resonator of claim 1, wherein the whole length of said superconductive microstrip line bent to said U-type structure is as long as half of the wavelength corresponding to the center frequency of a filter constituted by said U-type superconductive microstrip resonator.

3. The U-type superconductive microstrip resonator of claim 1, wherein two sides of a open end of said U-type structure are different from each other in length.

4. The U-type superconductive microstrip resonator of claim 2, wherein two sides of a open end of said U-type structure are different from each other in length.

5. A superconductive microstrip filter, comprising:  
an input coupling line, for receiving signals to be filtered and

coupling-outputting said signals;

a plurality of U-type superconductive microstrip resonators with the same structure and dimension, for performing filtering process for said signals output by said input coupling line to obtain signals in a corresponding frequency band and then coupling-outputting said obtained signals;

an output coupling line, for coupling-outputting said signals outputted by said U-type superconductive microstrip resonators.

6. The superconductive microstrip filter of claim 5, wherein said plurality of U-type superconductive microstrip resonators are arranged in parallel with each other.

7. The superconductive microstrip filter of claim 6, wherein any two neighbouring U-type superconductive microstrip resonators in said plurality of U-type superconductive microstrip resonators are arranged axisymmetrically and in parallel with each other.

8. The superconductive microstrip filter of claim 7, wherein for any two neighbouring U-type superconductive microstrip resonators being arranged axisymmetrically and in parallel with each other, the longer side of a open end of each resonator is closer to a symmetrical axis than a

respective shorter side thereof.

9. The superconductive microstrip filter of claim 7, wherein for any two neighbouring U-type superconductive microstrip resonators being arranged axisymmetrically and in parallel with each other, a shorter side of a open end of each resonator is closer to a symmetrical axis than a respective longer side thereof.

10. The superconductive microstrip filter of claim 6, wherein all the longer sides of open ends of said plurality of U-type superconductive microstrip resonators are arranged to face toward the same direction.

11. The superconductive microstrip filter of anyone of claim 6, wherein the interval between any two neighboring U-type superconductive microstrip resonators is determined in accordance with particular requirements for designing said filter.

12. The superconductive microstrip filter of anyone of claims 7, wherein the interval between any two neighboring U-type superconductive microstrip resonators is determined in accordance with particular requirements for designing said filter.

13. The superconductive microstrip filter of anyone of claims 8, wherein the interval between any two neighboring U-type superconductive microstrip resonators is determined in accordance with particular requirements for designing said filter.

14. The superconductive microstrip filter of anyone of claims 9, wherein the interval between any two neighboring U-type superconductive microstrip resonators is determined in accordance with particular requirements for designing said filter.

15. The superconductive microstrip filter of anyone of claims 10, wherein the interval between any two neighboring U-type superconductive microstrip resonators is determined in accordance with particular requirements for designing said filter.

16. The superconductive microstrip filter of anyone of claims 5, wherein, as for the U-type superconductive microstrip resonator which is closest to said input coupling line among said plurality of U-type superconductive microstrip resonators, one side of said open end thereof being closer to said input coupling line has a top end aligned with the top portion of said input coupling line.

17. The superconductive microstrip filter of anyone of claims 6

wherein, as for the U-type superconductive microstrip resonator which is closest to said input coupling line among said plurality of U-type superconductive microstrip resonators, one side of said open end thereof being closer to said input coupling line has a top end aligned with the top portion of said input coupling line.

18. The superconductive microstrip filter of anyone of claims 7 wherein, as for the U-type superconductive microstrip resonator which is closest to said input coupling line among said plurality of U-type superconductive microstrip resonators, one side of said open end thereof being closer to said input coupling line has a top end aligned with the top portion of said input coupling line.

19. The superconductive microstrip filter of anyone of claims 8 wherein, as for the U-type superconductive microstrip resonator which is closest to said input coupling line among said plurality of U-type superconductive microstrip resonators, one side of said open end thereof being closer to said input coupling line has a top end aligned with the top portion of said input coupling line.

20. The superconductive microstrip filter of anyone of claims 9 wherein, as for the U-type superconductive microstrip resonator which is

closest to said input coupling line among said plurality of U-type superconductive microstrip resonators, one side of said open end thereof being closer to said input coupling line has a top end aligned with the top portion of said input coupling line.

21. The superconductive microstrip filter of anyone of claims 10 wherein, as for the U-type superconductive microstrip resonator which is closest to said input coupling line among said plurality of U-type superconductive microstrip resonators, one side of said open end thereof being closer to said input coupling line has a top end aligned with the top portion of said input coupling line.

22. The superconductive microstrip filter of anyone of claims 5, wherein, as for the U-type superconductive microstrip resonator being closest to said output coupling line among said plurality of U-type superconductive microstrip resonators, one side of said open end thereof being closer to said output coupling line has a top end aligned with the top portion of said output coupling line.

23. The superconductive microstrip filter of anyone of claims 6, wherein, as for the U-type superconductive microstrip resonator being closest to said output coupling line among said plurality of U-type

superconductive microstrip resonators, one side of said open end thereof being closer to said output coupling line has a top end aligned with the top portion of said output coupling line.

24. The superconductive microstrip filter of anyone of claims 7, wherein, as for the U-type superconductive microstrip resonator being closest to said output coupling line among said plurality of U-type superconductive microstrip resonators, one side of said open end thereof being closer to said output coupling line has a top end aligned with the top portion of said output coupling line.

25. The superconductive microstrip filter of anyone of claims 8, wherein, as for the U-type superconductive microstrip resonator being closest to said output coupling line among said plurality of U-type superconductive microstrip resonators, one side of said open end thereof being closer to said output coupling line has a top end aligned with the top portion of said output coupling line.

26. The superconductive microstrip filter of anyone of claims 9, wherein, as for the U-type superconductive microstrip resonator being closest to said output coupling line among said plurality of U-type superconductive microstrip resonators, one side of said open end thereof

being closer to said output coupling line has a top end aligned with the top portion of said output coupling line.

27. The superconductive microstrip filter of anyone of claims 10, wherein, as for the U-type superconductive microstrip resonator being closest to said output coupling line among said plurality of U-type superconductive microstrip resonators, one side of said open end thereof being closer to said output coupling line has a top end aligned with the top portion of said output coupling line.